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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/935,061	08/21/2001	Brian K. Kobilka	STAN-213	7757
24353	7590	04/08/2004	EXAMINER	
BOZICEVIC, FIELD & FRANCIS LLP			LI, RUIXIANG	
200 MIDDLEFIELD RD			ART UNIT	
SUITE 200			PAPER NUMBER	
MENLO PARK, CA 94025			1646	

DATE MAILED: 04/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/935,061	Applicant(s) KOBILKA ET AL.	
	Examiner Ruixiang Li	Art Unit 1646	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 and 13-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 9-12, and 20-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>4/8/2003, 1/26/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

I. Status of Application, Amendments, and/or Claims

The amendment filed on January 26, 2004 has been entered. Claims 1, 2, 5, and 8 have been amended. Claims 20-23 have been added Claims 1-23 are pending. Claims 1-4, 9-12, and 20-23 are currently under consideration.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

II. Withdrawn Objections and/or Rejections

The rejection of claims 1-4 and 9-12 under 35 U.S.C. §112, 1st paragraph, as set forth at pages 3-5 of the previous office action (Paper No. 11, August 26, 2003) has been withdrawn in view of Applicants' amendment to the claims, Applicants' argument, and the declaration of Dr. Brian Kobilka under 37 C.F.R. §1.132.

The rejection of claims 1-4 and 9-12 under 35 U.S.C. §112, 2nd paragraph, as set forth at pages 5-6 of the previous office action (Paper No. 11, August 26, 2003) has been withdrawn in view of Applicants' amendment to the claims.

The objection to claim 1 for minor informality, as set forth at page 7 of the previous office action (Paper No. 11, August 26, 2003) has been withdrawn in view of Applicants' amendment to the claim.

III. Information Disclosure Statement

The Information Disclosure Statements submitted on 4/8/2003 and 1/26/2004 have been considered by the Examiner and a signed copy of the form PTO –1449 is attached to this office action.

IV. Drawings

The drawings submitted on 01/26/2004 have been accepted by the Examiner.

V. Claim Rejections under 35 USC § 102 (b)

The rejection of claims 1-4 and 9-12 under 35 U.S.C. 102(b) as being anticipated by Gether et al. (The EMBO Journal 16:6737-6747, 1997), as set forth in the previous office action (Paper No. 11, August 26, 2003), is maintained.

Applicants argue that claim 1 has been amended to incorporate the limitation, "with the proviso that the probe is not positioned in a transmembrane domain" (2nd paragraph of page 16 of Applicants' argument). Applicants submit that Gether et al. do not teach a GPCR giving a conformationally sensitive detectable probe positioned on or within the conformationally sensitive third intracellular domain of the GPCR (4th paragraph of page 16 of Applicants' argument).

Applicants' argument has been fully considered, but is not deemed to be persuasive because Gether et al. teach that a beta2 adrenergic receptor mutant comprising cys265 (Table I, last line), which is located on the third intracellular domain (see Fig. 1A of the instant disclosure), produces a signal change in response to a full agonist isoproterenol (Fig. 2F). Since the language recited in claim 1 (lines 3-6), "the

GPCR having a conformationally sensitive detectable probe positioned on or within a conformationally sensitive third intracellular domain of the GPCR...", is an open language, the reference of Gether et al. meets the limitations of claims 1-4 and 9-12.

Applicants argue that Gether et al. merely disclose a study aimed at determining what cysteine residues of a GPCR are important in agonist induced conformational changes of the receptor (4th paragraph of page 15 of Applicants' argument). Applicants further argue that Gether et al. do not disclose or teach a screening assay in which candidate agents may be screened to identify GPCR ligands (bottom of page 15 of Applicants' argument).

Applicants' argument has been fully considered, but is not deemed to be persuasive because Gether et al. teach a method for directly monitoring conformationally changes in a GPCR, beta2 adrenergic receptor induced by an agonist or an antagonist. Such a method can clearly be applied to the identification of a ligand for a GPCR.

VI. Claim Rejections under 35 USC § 112, 2nd paragraph

Claims 2 and 20-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This is a new ground of rejection.

Claim 2 is indefinite because it recites "agonist activity" (line 5). Since the preamble of amended claim 1 from which claim 2 depends recites a method for

identifying a ligand, it is unclear what the metes and bounds of the term are. It appears that Applicants intend to mean "binding of the candidate agent to the GPCR".

Claims 20-23 are indefinite because the steps set forth in the method fails to identify a ligand for a GPCR because the method recites a step of contacting a plurality of GPCRs with a candidate agent. It is unclear how the ligand for a specific GPCR among a plurality of GPCRs is identified.

VII. Conclusion

No claims are allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ruixiang Li whose telephone number is (571) 272-0875.

The examiner can normally be reached on Monday-Friday, 8:30 am-5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler, can be reached on (571) 272-0871. The fax number for this Group is (703) 872-9306.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [yvonne.eyler@uspto.gov]. All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-1600.

Ruixiang Li
Examiner
April 4, 2004


GARY KUNZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1600